# Manage and Conserve Water and Energy Resources

Implementation Action Area #1: Implementing Energy and Water Retrofit Programs

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
<del>Develop a</del>	CMAP <u>, CNT</u>	Implement the Chicago	Revise
framework for	Energy, Delta	Region Retrofit Ramp Up	
retrofit program	<u>Institute,</u>	program, which was funded in	
administration	<u>Community</u>	April 2010 at a level of \$25	
Administer and	<u>Investment</u>	million by the U.S.	
provide a	Corporation (CIC),	Department of Energy (DOE).	
<u>financial</u>	local lending	Maintain administration of	
framework for	institutions, City	single-family residential and	
ongoing retrofit	of Chicago, City of	multifamily financing	
programs	Rockford	programs, developed between	
		2010- <del>20</del> 13 through the \$25	
		million Better Buildings	
		Neighborhood Program grant	
		funded by the U.S.	
		Department of Energy (DOE).	

#### **Implementation Examples:**

- Following the awarding of a grant from DOE, CMAP contracted with the Center for Neighborhood Technology – Energy (CNT Energy) as lead implementation agency of Chicago Region Retrofit Ramp-Up (CR3), which would eventually become the <u>Energy Impact Illinois</u> (EI2) program.
- After developing an implementation plan and overall budget framework, CMAP/CNT
  Energy contracted with 15 additional subgrantee organizations to develop and deliver
  products focused on the three key barriers to energy efficiency adoption in the region: 1)
  access to information, 2) access to finance, and 3) access to a trained workforce.
- All contract procurements and grant obligations were completed by DOE deadline (11/18/2013).
- By 9/30/2013, EI2 programs across the single and multifamily residential sector completed nearly 6,100 retrofits to at or above 15 percent energy savings, resulting in an estimated \$2 million in annual energy savings among participants.
- By 9/30/2013, EI2 commercial programs will have identified nearly \$40 million in nearterm energy savings project recommendations across 22 million square feet of commercial space in the Chicago region. These recommendations will be utilized to conduct retrofit work in participant buildings to decrease energy use by 20 percent over the next 5 years.

- As of 9/30/2013, the initial period of performance for the EI2 grant is complete. Both the Delta Single-Family Residential and Energy Savers Multifamily Residential program will continue offering financing through EI2 into the near future through a no-cost grant extension until November 2014. The other aspects of the implementation phase of the grant (e.g., web portal development, communication strategy, workforce intermediary development, and other finance programs) have all been completed. For the near term, CMAP will maintain its lead role in helping the remaining financing programs continue to issues energy efficiency loans, but will not be pursuing further implementation work in energy efficiency.
- Consolidated with following implementation action.



Action	<del>Lead</del>	<del>Specifics</del>	Retain/Revise/	Formatted: Strikethrough
	<del>Implementers</del>		Complete/Delet	e
Provide a	State (DCEO),	Support the development and delivery of	DRevise elete	Formatted: Strikethrough
<del>financial</del>	municipalities,	financing products targeted across retrofit	(Combine with 1	Formatted: Strikethrough
framework for	utilities, lending	customer segments. Help support a market	consolidated wit	Formatted: Strikethrough
retrofit	institutions	transformation to broaden retrofit demand and	<del>previous</del>	Formatted: Strikethrough, Superscript
<del>programs</del>		to give private lenders the confidence to lend to	action)recomme	Formatted: Strikethrough
		customers for energy efficiency measures.	dation)Retain	Formatted: Strikethrough
		Provide case study data that shows that energy		
		savings are an effective and dependable cash		
		flow stream that can be used to secure loans.		
		Utilities and municipalities should emulate		
		programs as the ones the Illinois Department of		
		Commerce and Economic Opportunity (DCEO)		
		is currently administering for financing energy		
		and water efficiencies by partnering with		
		retailers to conduct rebate programs to replace		
1		appliances/fittings with more efficient models.		

- Energy Impact Illinois, in partnership with DCEO, local utilities, and other key stakeholders as part of the EI2 Retrofit Steering Committee, developed and deployed four energy efficiency finance programs across multiple building sectors during the fall of 2011.
- Energy Savers Multifamily Program Administered by the Community Investment
  Corporation (CIC) and CNT Energy, this program utilized EI2 funding and built upon
  their already successful multifamily retrofitting program that provides financing,
  technical assistance, construction oversight, and annual performance monitoring for
  participating building owners. Through 9/30/2013, Energy Savers will have loaned out
  more than \$3 million to local building owners and retrofitted close to 2,600 units to at
  least 15 percent energy savings annually.
- Delta Residential Retrofit Program This \$3.5 million program managed by the Delta Institute provides low-cost competitive financing for single-family homeowners who own 1-4 unit buildings in the Chicago region. Homeowners who take part in this program can complete comprehensive energy efficiency upgrades, which includes insulation and air sealing repair, furnace/boiler and air conditioning replacements, and Energy Star appliance upgrades, to achieve at least 15 percent energy savings in their homes. In addition to financing, a limited-time \$1,750 rebate incentive toward the cost of a home retrofit was available from August 2012 to September 2013, which drove extensive demand in the program and allowed for the completion of over 3,000 home retrofits in the region.
- IFF Non-profit Retrofit Program Non-profit organizations looking to make energy
  efficiency improvements were able to take advantage of low-interest loans and specific
  project-related incentives to make energy efficiency improvements to their buildings.

Over the course of this program, 19 non-profit organizations representing 400,000 square feet of commercial space participated in the audit phase of the program. Nine of these organizations moved forward with comprehensive retrofits of their buildings to at least 15 percent energy savings and utilized \$2.4 million in private investment available through IFF to make these improvements.

• SCIenergy Commercial/Industrial Program – SCIenergy was contracted to provide over \$1 million in technical assistance funding to conduct commercial/industrial energy efficiency predevelopment studies for a number of commercial sites within the CMAP region. These predevelopment studies were the first step for accessing SCIenergy's innovative Managed Energy Services Agreement (MESA) – an energy efficiency financing model that provides investment capital for major infrastructure improvements to commercial properties to create cost savings while still meeting the comfort and service obligations of the tenants' lease agreements. Through this effort, SCIenergy helped identify \$11.4 million in near-term efficiency opportunities across over 5.5 million square feet of commercial space, and is currently working with participant organizations to move forward with its MESA model.

- Both the Delta Residential Retrofit Program and the Energy Savers Multifamily Retrofit
  Program will continue under EI2 until at least November 2014 through a no-cost grant
  extension with DOE. Through its agreement with DOE and ARRA requirements for the
  grant, CMAP must maintain federal requirements with regard to reflowing funds
  produced by these programs (from loans that were made during the grant period). DOE
  will provide more guidance on long-term use of these funds over the coming year.
- Consolidated with previous implementation action.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Increase	State, trade	Develop-Support ongoing development	Revise
access to a	associations,	of a regional training center for certified	
trained	community	efficiency work. Establish Support	
workforce	colleges,	ongoing establishment of consistent	
	Workforce	standards and certifications for workers	
	Investment	and contractors and create a network to	
	Boards	match building owners with certified	
		contractors. Partner with workforce	
		agencies to €createinge a "central	
		broker" to match trained job-seekers to	
		businesses seeking certified workers.	

- Energy Impact Illinois (EI2) created just over 100 jobs over the 3-year cycle of the program, including both skilled trade and professional jobs.
- Centers for New Horizons (CNH), an EI2 contractor, held several roundtables promoting the program and informing contractors of qualifications required to participate in the EI2 program.
- CNH, working with Chicago Jobs Council (CNT Energy's program implementation subcontractor), also developed an inventory of training centers and educational opportunities available for contractors seeking energy efficiency specialization training.
- CNT Energy developed a contractor model to assist contractors with completing necessary rebate paperwork, and also provided educational opportunities and staff support for improved quality of work.

#### Rationale for Retain/Revise/Complete/Delete Assessment:

 A number of agencies – Chicago Jobs Council, Center for Green Technology, as well as some private contracting firms – have started this type of work. Instead of "develop" and "create," this action should be revised to acknowledge work started and ongoing.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Increase access	Chicago Regional	<del>Develop a</del> <u>Maintain</u> regional	Retain Revise
to information	Retrofit Steering	information <u>al website</u>	
concerning	Committee	(www.energyimpactillinois) -center	
retrofits	(DCEO, CMAP,	for connecting building owners to	
	City of Chicago,	qualified contractors and,	
	utilities,	utility/nonprofit energy efficiency	
	nonprofits)CMAP,	incentives, and financingfinancial	
	CNT Energy	products <del>, conduct outreach via</del>	
		community based/trade associations	
		and Chambers of Commerce, use	
		energy audits and web based	
		applications to provide information to	

- The EI2 website (<a href="http://energyimpactillinois.org">http://energyimpactillinois.org</a>) serves as a clearinghouse for information about energy efficiency upgrades, rebates, and financing.
- The EI2 call center serves as the primary point of contact for residents and was promoted as the only phone number a City of Chicago resident could call to participate in the Retrofit Chicago program.
- The EI2 Road Maps developed as part of the contract with PositivEnergy Practice –
  provided commercial office spaces with a step-by-step, investment-case scenario
  designed to help buildings achieve a 20 percent energy reduction commitment made as
  part of their participation in the Retrofit Chicago Commercial Buildings Initiative.

	building owners, and introduce	
	marketing and branding strategies for	
	retrofits Expand the use of	
	financing that is already available,	
	such as the funding from the EEPS.	

# Rationale for Retain/Revise/Complete/Delete Assessment:

• Many of the implementation examples mentioned above will continue to be maintained and updated for the near future. As part of its EI2 work, CNT Energy will be responsible to provide new information on energy efficiency that becomes available in the region.



#### Implementation Action Area #2: Integrating Land Use Planning and Resource Conservation

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Create model	CMAP	Assist communities in amending or	Retain Revise
codes/ordinances		adopting codes for water conservation by	
and <del>/or</del> support use		providing ordinance language and related	
of existing models.		resources. Assist implementation by	
		making available guidance for model	
		review processes.	

### **Implementation Examples:**

- In 2011, CMAP used its <u>model ordinance</u> for water conservation to guide development
  of a <u>conservation program and ordinance</u> in the Village of Orland Park as part of an LTA
  project.
- The Metropolitan Planning Council, working with CMAP, undertook an outdoor lawn watering conservation <u>ordinance</u> development effort with the municipalities that are part of the Northwest Water Planning Alliance.
- CMAP supported the City of Chicago's efforts to introduce an energy benchmarking
  and disclosure ordinance as a means of tracking energy usage city-wide, which passed
  the City Council on September 11, 2013.

- CMAP's model water-use conservation ordinance, published in 2010, remains relevant
  and should continue to be of value as a guide to communities who wish to update their
  water-related codes and ordinances.
- Added existing models to the Action text to ensure greater consistency between the Action and Specifics.

Action	Lead Implementers	Specifics	Retain/Revise/ Complete/Delete
Accelerate use of efficient appliances/fixtures through green code adoption	Counties, Municipalities Federal, State, Mmunicipaliti es	Amend ordinances to reflect requirements of the Illinois Energy Efficiency Building Act and expand on it to include items such as appliances and fixtures Utilize Energy Star Portfolio Manager/Energy Performance Indicator or other performance indicators for energy efficiency review in commercial and residential buildings. Support federal efforts to improve energy efficiency standards in products such as appliances and fixtures. Adopt appliance and fixture codes where possible to an efficiency level greater than federal or state requirements, such as those offered through the US Green Building Council's Leadership in Energy and Environmental Design (LEED) standards.	Revise

# Rationale for Retain/Revise/Complete/Delete Assessment:

• The federal government typically sets appliance standards, not counties or municipalities. However, state and local governments could adopt green codes to ensure the use of efficient appliances and fixtures.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Provide technical	State (DCEO.	Encourage incorporation of	Revise
assistance to local	<u>IDNR</u> ), CMAP	sustainability plans or codes in local	
governments		planning practices during energy-	
		related grant award processes by	
		prioritizing funding to communities	
		that have taken these initiatives.	
		Allocate funding for the	
		development of green codes. CMAP	
		should support local	
		multijurisdictional efforts, along	
		with IDNR and permittees, during	
		the transition period brought on by	
		regulatory changesoffer	
		conservation coordination	
		assistance to communities that wish	
		to employ water conservation	
		<del>practices</del> .	

- Through its LTA program, CMAP has developed water conservation plans in Evanston (<u>Evanston Water Conservation and Efficiency Plan</u>) and Oak Park (<u>Oak Park Water Conservation and Efficiency Plan</u>) as well as a <u>new water conservation code</u> for the Village of Orland Park.
- MPC, CMAP, and the DuPage Water Commission completed a four-part educational workshop series for water conservation managers and others interested in water conservation. The team then selected the Village of Westmont as the recipient of water conservation implementation assistance, which is expected over 2013-14.
- CMAP energy staff assisted in the development of a number of LTA sustainability plans

   for example, <u>Park Forest</u> providing specific information about energy efficiency opportunities for communities to implement as part of a sustainability plan.
- CMAP staff has led a strategic planning exercise with the Northwest Water Planning Alliance (NWPA) that will position the NWPA to achieve its mission in 2014 and beyond.
- Partnering with the Center for Neighborhood Technology (CNT), CMAP worked with the IDNR Office of Water Resource's Lake Michigan Allocation Program office to improve understanding of permittee water loss challenges and practices.

#### Rationale for Retain/Revise/Complete/Delete Assessment:

 Water-related LTA work will remain of interest to communities as either a standalone project or an adjunct to other types of planning assistance. However, the "Specifics" language might benefit from revision. The wording "conservation coordination assistance" suggests a type of expertise that CMAP currently lacks and is unlikely to add until sustainable funding can be secured. Rather, CMAP should offer technical assistance and/or resources when possible to communities that wish to employ water conservation and efficiency practices, programs, and policies.

• With funding from IDNR, staff should support the Northwest Water Planning Alliance (NWPA) and Lake Michigan Allocation Program (LMAP) office as both activities are in line with Water 2050 recommendations and, therefore, approved by IDNR.



Action	Lead Implementers	Specifics	Retain/Revise/ Complete/Delete
Promote rainwater harvesting for non-potable indoor uses	State, counties, municipalities, nonprofits	Local governments should ensure that existing regulations do not prohibit the indoor use handling of rainwater. Collaborate in executing informational/demonstrational efforts for the implementation of rainwater harvesting. Support Aamendment of local ordinances and codes accordingly.	Retain Revise

Public Act <u>97-0852</u> was passed in 2012 to require the Illinois Department of Public
Health to modernize the Illinois Plumbing Code to better protect natural resources, for
example by developing standards for reuse of non-potable water.

- Once a revised Illinois Plumbing Code takes affect and rainwater harvesting for nonpotable indoor use no longer requires a code variance, CMAP could develop a paper that offers rationale, examples, and guidance for support and implementation of this action. Such activity will be most useful in groundwater-dependent communities.
- Slight text revisions.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Increase	State (IDNR),	Advise and guide IDNR to update	Revise
commitment to	CMAP, local	its annual water audit form to	
water efficiency	multijurisdictional	follow the International Water	
by promoting	efforts, municipal-	Association and American Water	
water-loss	run community	Works Association standard water	
reduction,	water suppliers	balance protocol to help permittees	
water		reduce water loss. Work with	
conservation_		IDNR, local multijurisdictional	
and reuse		efforts, and community water	
programs and		suppliers to develop conservation	
projects		and efficiency plans. Encourage	
throughout the		annual water audit reports that	
CMAP regionin		follow the International Water	
the Lake		Association and American Water	
Michigan		Works Association standard water	
Service Region		balance protocol while eliminating	
		the maximum unavoidable loss	
		allowance. Conserving Lake	
		Michigan water by individual	
		<del>permittees is in the interest of the</del>	
		region because it would potentially	
		make Lake Michigan water	
		available to more communities.	
		Permittees should make	
		information available online to	
		encourage increased engagement	
		in conservation activities. CMAP	
		should use its relationships and	
		access to communities to assist	
		IDNR with outreach efforts to	
`		achieve these recommendations.	
		CMAP should develop a reporting	
		framework/template for	
		communities to demonstrate water	
		management activities to the Lake	
		Michigan Management Section.	
		CMAP should encourage	
		communities to publicize their	
		water conservation milestones.	

- A rule <u>proposed</u> by IDNR in Spring 2013 meets many of the specific recommendations
  of this action area, including elimination of the maximum unavoidable loss allowance
  and encouraging water conservation by Lake Michigan users.
- CMAP is collaborating with the IDNR Office of Water Resources through an LTA project
  to evaluate the reasons for water loss at specific utilities in the region. A final report,
  issued in January 2014, will feature observations and recommendations for IDNR as a
  prelude to expected changes to rules and regulations and a transition period for
  permittees that will follow.
- In 2011, the City of Chicago initiated a 10-year water main replacement plan to replacement 900 miles of mains. Replacement of aged mains should reduce water losses due to leakage.

- IDNR's proposed changes to rules and regulations should to be complete by mid-2014. One potential outcome is a revised annual water audit form that more closely follows the IWA/AWWA water balance table. Any progress with permittees regarding conservation, however, will likely require the full support and follow-through of IDNR on the conservation-related conditions of permitting; most permittees are highly unlikely to do anything that isn't required by IDNR. The emphasis, therefore, should be on maintaining and strengthening CMAP's working relationship with IDNR in order to most effectively reach permittees. A top priority in response to rule/regulations change is to help equip communities with the tools and information necessary to reduce water loss.
- Revised text to emphasize water-loss reduction and broaden the geographic scope of the action as it is appropriate throughout the region.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
<u>SupportIdentify</u>	State (ISWS,	CMAP should assist local	Revise
and pProtection of	<del>ISGS),</del> CMAP,	governments lead a	
sensitive aquifer	count <u>ies,</u>	collaboration to identify	
recharge areas	municipalities	SARAs, with prioritization of	
(SARAs)	<del>y and ies,</del>	SARAse those most important	
	mMunicipal	for protectionandas well as	
	governimtients	develop and disseminate	
		modelcode and ordinances	
		<u>revisions</u> to ensure their	
		pr <u>otect</u> eservation.	

 As part of <u>Water 2050</u>, CMAP developed an initial identification of sensitive aquifer recharge areas based on an earlier effort in McHenry County. This initial work was incorporated into the green infrastructure mapping that CMAP developed in collaboration with Chicago Wilderness in 2011-12 (the Green Infrastructure Vision, available at <a href="http://www.cmap.illinois.gov/green-infrastructure">http://www.cmap.illinois.gov/green-infrastructure</a>).

# Rationale for Retain/Revise/Complete/Delete Assessment:

 Revisions to emphasize the role of local governments in prioritizing and protecting SARAs.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Promote and/or	State (DCEO),	Use planning grant programs to assist	Revise
<u>practice</u> Encourage	CMAP, local	communities in incorporating resource	
the integration of	governments	conservation in local comprehensive	
resource		planning. Encourage communities to	
conservation in		refrain from assuming constraint-free	
land use planning		indicate available future water	
		supplies for projected population	
		growth in comprehensive plans.	

- A number of projects undertaken through CMAP's LTA program have focused on resource conservation in land use planning, including the <u>Village of Lakemoor</u> <u>Comprehensive Plan</u> and especially the <u>Village of Campton Hills Comprehensive Plan</u>, which recommended strategies for protecting water supplies and preventing degradation of important natural resources, among others.
- Completed in 2012, the <u>Recommendations for Integrated Water Resources Planning in Lake Zurich</u> report analyzes the Village's land use policies for their impact on water resources.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• Communities using Lake Michigan water know their available supply of water as they each have an allocation set for 20 years. In contrast, groundwater-dependent communities are typically not equipped to know or indicate available future supply. Rather, they assume water will be available and/or develop new wells to ensure future water supply. Revise the last sentence of the Specifics column and the "Lead Implementers" accordingly.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Delete
Adopt policies to	Municipalities,	Water utilities should require large-scale	Revise
encourage	water utilities.	projects to seek water neutrality. Project	
attainment of zero	corporate and	sponsors should work with utilities to set an	
water	<u></u> industrial	annual water budget following an audit that	
footprints/water	entities	identifies internal water saving mechanisms	
neutrality for large		and external offsets if the budget is exceeded.	
scale projects		Project operators should then adhere to the	
		water budget. If the budget is exceeded, as	
		determined by water billing triggers,	
		operators would contribute to local	
		conservation efforts to offset that amount	
		elsewhere in the system. CMAP should	
		provide baseline or case study information to	
		increase awareness of the concept and	
		promote its applicability in the region.	

- It is highly unlikely that a water utility would require this action until such time as supply scarcity becomes a reality. In the meantime, there are other more practical strategies that a water utility might pursue to affect efficiency and conservation-oriented behavior. Furthermore, a water-neutrality policy position might best be implemented at a subregional or regional scale to create an even playing field and eliminate competitive pressures that municipalities are sensitive to. Also, this is likely to be a corporate-driven strategy to fit a corporate mission.
- In any event, the idea might be adopted where either system capacity or actual supply pose a constraint on availability. CMAP can develop a strategy report that raises the profile of the practice.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Delete
Implement urban	Counties,	Adopt minimum standards for tree	Revise
and community	municipalities,	coverage in development projects along	
forestry programs	park districts,	with tree preservation and maintenance	
	<u>nonprofits</u>	regulations. Undertake these programs	
		through park districts in public sites.	
		Incentives should be provided for	
		residents to plant trees, such as	
		discounted sales and/or planting	
		assistance. Land-use change should be	
		guided in part by an urban forestry	
		program that strives to maintain	
		woodlots and other tree cover during	
		development.	

- In October 2013, Openlands <u>launched</u> an urban forestry initiative in the City of Chicago. The project is funded by a \$500,000 grant from the MacArthur Foundation, and will plant 5,000 trees through 2015.
- The Metropolitan Mayors Caucus provides grants to municipalities through the <u>Mitigating Emerald Ash Borer Impacts on the Urban Forest</u> program. The \$491,500 in funds awarded in 2013 support reforestation, technical assistance, and wood utilization programs.

#### Rationale for Retain/Revise/Complete/Delete Assessment:

• Consider broadening the language in the "Specifics" column to include a wider range of urban forestry programs. Added "nonprofits" to list of "Lead Implementers".

Action	Lead	Specifics	Retain/Rev	ise/
	Implementers		Delete	
Use green	Counties,	Create incentives and for remove barriers in	Revise	
infrastructure	municipalities	code/ordinance language to Eensure that		
practices to <u>help</u>		stormwater management using green		
manage		infrastructure is integrated in the planning		
stormwater in new		and design phase of development projects.		
development and		Use infill or redevelopment as opportunities		
redevelopment		to promote retrofits with green infrastructure		
		<u>during in (re)</u> develop <u>mentd areas</u> . Require		
		maintenance plans in the stormwater		
		management permitting process that specify		
		maintenance activities and indicate		
		responsible parties. These plans should be		
		transferrable with property deeds. Take		
		advantage of the IEPA-administered Clean		
		Water State Revolving Fund (CWSRF) Green		
		Project Reserve to finance the implementation		
		of green infrastructure.		

 On October 3, 2013, the Metropolitan Water Reclamation District of Greater Chicago Board of Commissioners unanimously approved the <u>Cook County Watershed</u> <u>Management Ordinance</u>. The ordinance will help mitigate the stormwater runoff impacts of new development by requiring various green infrastructure practices.

- This is sound policy, but terms such as "ensure" and "require" suggest that codes and ordinances are in place to ensure and/or require such practices. In most places, they are not.
- The Green Project Reserve component of the CWSRF, administered by Illinois EPA, features four categories of eligible projects including one that covers green infrastructure.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Delete
Implement green	Counties,	Local governments should create	Revise
infrastructure	municipalities,	incentives for implementing green	
retrofits	<u>homeowner's</u>	infrastructure retrofits (e.g.,	
	associations,	stormwater utility program).	
	property	Watershed plans for developed areas	
	<u>owners</u>	should identify potential green	
		infrastructure retrofits, such as rain	
		gardens, green streets, parking lot	
		bioretention, and so forth. These plans	
		should be used to help secure capital	
		funding for retrofits.	

- Three <u>watershed plans</u> produced by CMAP in 2011 made recommendations for green infrastructure retrofits. And a watershed plan to be completed in 2014 will make these types of recommendations.
- The <u>Chi-Cal Rivers Fund</u> is a new grant opportunity focused on river restoration
  projects in the Chicago and Calumet region, and will focus on green infrastructure
  projects that increase stormwater storage capacity, among other project types.
  Approximately \$1.1 million was available through the 2013 request for proposals.

- Add private property owners and homeowner associations to the list of "Lead Implementers".
- Add text to "Specifics" recommending the local governments create incentives for green infrastructure retrofits.

# Implementation Action Area #3: Pricing

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Utilize full cost	Illinois	Municipalities should decouple	Revise
pricing to	Commerce	water utility budgets from the	
incentivize	Commission,	municipal general revenue fund and	
more efficient	CMAP,	ensure that revenues collected from	
water use_ <del>and</del>	municipalities,	water billing meet capital and	
to-fund	utilities	operations and maintenance (O &	
conservation		M) budgets. Utilities should	
programs <u>, and</u>		implement metering and	
fund both		appropriate bill designs. Utilities	
short- and long-		should ensure that bills reflect the	
term capital		full cost of service for treatment and	
projects in		delivery of water. CMAP should	
addition to		offer technical assistance on	
<del>O&amp;M</del> operations		conservation pricing and rate-	
<u>and</u>		setting.	
maintenance.			

# **Implementation Examples:**

CMAP worked with the Illinois-Indiana Sea Grant and the University of Illinois
 Extension to develop the <u>Full-Cost Water Pricing Guidebook</u> in 2012. This resource helps
 make the case for full-cost pricing to water utilities and elected boards in the region.
 Since publication, staff have been holding workshops and conducting technical
 assistance to encourage the adoption of full-cost pricing.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• Revise text to include the use of full-cost pricing to support capital and O&M costs.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Institute	Counties,	Local governments with stormwater	Retain Revise
stormwater	municipalities	management responsibilities should	
utility		charge dedicated user fees to property	
program.		owners to cover the costs of	
		maintaining stormwater	
		infrastructure. Such fees should be	
		directly linked to the amount of	
		impervious area on a site. With these	
		revenues in hand, local governments	
		should consider taking maintenance	
		responsibility for stormwater	
		infrastructure on private property, as	
		property owners (e.g., homeowner's	
		association) may not be willing or able	
		to do so.	

- CMAP published "<u>The Value of Stormwater Utilities for Local Governments in the Chicago Region</u>" in 2013 to help explain the benefits of stormwater utilities.
- The General Assembly passed <u>HB 1522</u> to allow DuPage and Peoria Counties to implement stormwater utility fees, which was signed into law as Public Act 98-0335 in 2013.
- In January 2013, the Village of Downers Grove became the latest municipality to institute a stormwater utility fee. Other municipalities are investigating the viability of setting up a stormwater utility.

- This is an appropriate and defensible policy position.
- Slight text revisions.

# Implementation Action Area #4: Funding

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Use the Clean	State (IEPA),	Local governments should take	Revise
Water State	counties,	advantage of the IEPA-administered	
Revolving Fund <u>'s-</u>	municipalities	CWSRF to finance the	
(CWSRF) Green	Local units of	implementation of water efficiency	
Project Reserve as	government	programs, including water	
a means for		conservation, reuse, and water-loss	
financing water		reduction). Local governments	
and energy		should also take advantage of the	
<u>efficiency</u>		CWSRF to finance the	
<u>programs</u> :		implementation of energy efficiency	
mechanism for		projects.	
implementing		Develop criteria that prioritize	
water		PWSLP to utilities that adopt full-	
<del>conservation</del> <sub>z</sub>		supply cost pricing structures in their	
reuse, and		water billing. Require that water	
measures <u>water</u>		supply utilities develop conservation	
loss reduction.		plans that set annual water use targets	
		to be reported to IEPA as a condition	
		for granting loans.	

# **Implementation Examples:**

 In September 2013, CMAP began discussions with IEPA on how to improve the distribution of incentive dollars for manufacturing pumps in wastewater treatment facilities.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• Revise the text to recommend that local governments take advantage of the CWSRF to fund water efficiency programs.

Action	<del>Lead</del>	<del>Specifics</del>	Retain/Revise/
	<b>Implementers</b>		Complete/Delete
Use the	State (IEPA)	Utilize the 20 percent of the State	ReviseDelete
Green Project		Revolving Funds for water and	
Reserve for		energy efficiency projects, such as	
energy and		retrofits to pumps and treatment	
water		processes, irrigation equipment,	
efficiencies		reuse of rainwater/stormwater, leak	
		detection equipment, and on-site	
		clean power production.	

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#### **Implementation Examples:**

 In September 2013, CMAP began discussions with IEPA on how to improve the distribution of incentive dollars for manufacturing pumps in wastewater treatment facilities.

- Illinois now offers the Clean Water Initiative, so the 20 percent threshold may longer be appropriate.
- Since the preceding action addressed the relationship between water efficiency and the CWSRF Green Project Reserve (GPR), this action should focus solely on the relation between energy efficiency and the CWSRF GPR; unless there is wisdom in combining the two actions into one that addresses both water and energy efficiency at once.
- Consolidated with previous action.

Action	Lead Implementers	Specifics	Retain/Revise/
			Complete/Delete
<del>Implement</del>	State (DCEO),	Research and review options for	Revise
<u>Implement</u>	<u>c</u> ounties,	counties and municipalities to	
<u>innovative</u>	municipalities,	move forward with energy	
<u>energy</u>	utilities	efficiency upgrades. Contract	
<u>efficiency</u>		with private ESCOs to identify	
financing		energy savings potential. One	
mechanisms,		option through Energy Service	
including		Companies (ESCOs) Ooffers cost	
Energy		sharing or loans for property	
Performance		owners for improvements to be	
Contracting		paid by consequent cost savings	
		resulting from the installation of	
		energy efficient equipment and	
		fixtures. ESCOs provide	
		guarantees that cost savings will	
		be attained; if not, they pay the	
		difference. DCEO also has an	
		extensive local government-	
		focused program and plays a key	
		role in this area.	

- DCEO, which is responsible for leading much of the public sector investment in energy efficiency throughout the state, offers the <a href="Energy Performance Contracting Program">Energy Performance Contracting Program</a> that utilizes the ESCO model through its Illinois Energy Now program.
- Cook County's Guaranteed Energy Performance Contracting (GEPC) began in 2013 with \$60,000,000 in facility upgrades, the largest energy savings contracts undertaken by a County to date. The program will generate over 600 local construction and technology jobs. The County will realize over 20 percent savings in energy use and 10 percent reduction in emissions. These savings to the County's current operating budget will pay for improvements over a 20-year period, including the cost of financing.

#### Rationale for Retain/Revise/Complete/Delete Assessment:

The above implementation example (ESCOs) is one of multiple options that are available
to counties and municipalities, and is not without some criticism. Consider adding other
options in the recommendation to counties and municipalities, and acknowledging the
key role for DCEO in this area.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Pursue	State (General	Explore the use of PACE financing,	Retain
innovative	Assembly,	Green Loan Programs, New Market Tax	
financing	IFA), counties,	Credits, Energy Efficiency Ratings	
mechanisms	municipalities,	Incentives, revolving loan funds and	
for retrofits	utilities,	loan pools, etc. for funding energy and	
	lenders	water efficiency programs. Form	
		partnerships required to implement	
		these programs with utilities, lending	
		institutions and contractors.	

• Local gas and electric utilities have partnered with AFCFirst Financial Corporation to bring on-bill financing to consumers who wish to make energy efficiency improvements to their homes. Participants are able to purchase high-efficiency products like appliances or HVAC equipment through their local utilities and pay back the cost over time through their monthly bills. More information can be found at the following website: <a href="http://www.ilenergyloan.com">http://www.ilenergyloan.com</a>.

#### Rationale for Retain/Revise/Complete/Delete Assessment:

New financing mechanisms for energy efficiency should be encouraged. EI2 brought a
new product to market in the region and was very successful (although it included
financial incentives). Standalone loan programs will continue to struggle as long as the
economy remains weak.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Establish	Federal	Address greenhouse gas emissions	Retain
comprehensive	(Congress)	economy-wide by such actions as	
energy and		improving the carbon content of fuels,	
climate change		reducing industrial emissions, and	
policy		limiting emissions from electricity	
		generation, as well as establishing	
		policies to promote energy	
		conservation and renewable energy.	
		The federal government should have a	
		strong role in this area.	

• Recent U.S. EPA <u>regulatory initiatives</u> have focused on greenhouse gas emissions.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• This continues to be a broad, long-range goal in the energy and climate change policy area.

Action	<u>Lead</u>	Specifics	Retain/Revise/
	<u>Implementers</u>		Complete/Delete
<u>Incorporate</u>	CMAP,	As part of their comprehensive and	This is a
energy usage	counties,	sustainability planning efforts,	potential new
and greenhouse	<u>municipalities</u>	counties and municipalities should	implementation
gas emissions	_	index their energy usage and	action.
indexing into		associated greenhouse gas emissions	
comprehensive		to a specific base year, and set goals to	
<u>and</u>		achieve a percentage savings over	
sustainability		time. Local government can take	
local planning		advantage of various energy	
		efficiency, renewable energy, or	
		"smart grid" programs available	
		through local utilities, nonprofits, or	
		other units of government.	

# Implementation Action Area #5: Local Governments as Early Adopters of Sustainable Practices

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Implement green	Counties,	Local governments in the region should	Retain
infrastructure	forest preserve	implement green infrastructure	
demonstration	and	demonstration projects with regular	
projects	conservation	performance monitoring to further	
	districts,	evaluate the applicability of such	
	municipalities,	measures to local conditions. They	
	park districts	should utilize available staff and	
		technical expertise/resources to construct	
		and maintain green infrastructure	
		facilities and perform seasonal	
		monitoring, modifying designs to adapt	
		to local conditions as necessary. Local	
		governments should partner with	
		developers in establishing	
		demonstration projects by offering	
		financial assistance/cost share with	
		construction costs.	

# **Implementation Examples:**

- CMAP energy staff assisted in the development of a number of LTA sustainability plans

   for example, <u>Park Forest</u> providing specific information about energy efficiency opportunities for communities to implement as part of a sustainability plan.
- CMAP energy staff provided insight and guidance on the energy efficiency section during the development of the Will County Sustainability Plan.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• This action remains a priority for CMAP and the region.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Utilize green	State (IDOT,	All governmental bodies that	Retain
infrastructure	IDNR), counties,	undertake construction	
practices in all	forest preserve	activities should implement	
public improvement	and conservation	policies that require the use of	
projects	districts,	site-appropriate green	
	municipalities,	infrastructure practices for	
	school and park	stormwater management.	
	districts		

• The Chicago Department of Transportation's 2013 edition of its <a href="Complete Streets">Complete Streets</a>
<a href="Guidelines">Guidelines</a> includes green infrastructure related to landscaping of medians and excess pavement. CDOT's "Chicago Forward" report from September 2012 highlights the Cermak/Blue Island sustainable streetscape project, a 1.5-mile project that incorporates landscaping, stormwater best practices, lighting efficiency, and other green infrastructure features.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• This action remains a priority for CMAP and the region.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Consolidate	Municipal-run	Local governments should	Revise
<u>community</u> water	<u>c</u> € <u>ommunity</u>	investigate coordinating or	
systems upply and	water systems OGs	consolidating water utilities to	
wastewater		enhance cost-effectiveness and lower	
treatment services to		financial risks. The expansion of	
achieve <del>energy</del>		existing water supply plants should	
efficiencies and		be emphasized over the development	
economies of scale		of smaller plants for individual	
and potential energy		utilities. A common funding stream	
efficiencies.		for plant expansion could be	
		obtained by tapping into collective	
		resources.	

- COGs may not be the appropriate "Lead Implementer" for utility consolidation. It will
  likely take a municipal-run system reaching out to neighbors to begin such a discussion.
  Note that investor-owned systems are regulated by the Illinois Commerce Commission
  and have economic incentives to achieve efficiencies. Municipal-run systems have also
  typically been in place longer and are less likely to be practicing asset management or
  full cost pricing.
- Further, while energy efficiency may be a potential benefit, it is not likely to be driver.
   CMAP could provide a support role then, but an engineering company will likely be the more appropriate player in a "next step" exploration of an opportunity.

Action	Lead	<del>Specifics</del>	Retain/Revise/
	<b>Implementers</b>		Complete/Delete
Consider devoting	Municipalities	Municipalities often receive free	Delete
the cost of power		electric service by utilities as	
under franchise		compensation for granting the	
agreements to		franchise privilege of using the	
retrofit and rebate		municipality's public rights of	
programs instead		way for the delivery of electricity.	
		Discussion should be initiated to	
		use the funds instead for retrofit	
		and rebate programs.	

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# Rationale for Retain/Revise/Complete/Delete Assessment:

• It may not be realistic to expect municipalities to automatically invest cost savings into energy efficiency in their localities. Many municipalities, especially in a continued weak economy, have strained budgets and would keep these cost savings for discretionary use.

 $<sup>^1\,\</sup>text{ComEd, Get rate information through tariff documents, under "Rider FCA - Franchise Cost Additions," see $$ \underline{\text{http://tinyurl.com/2eqkzwk}}$.$ 

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Utilize renewable	Municipalities,	Municipal utilities should seek to	<del>Delete</del> Revise
energy generation in	utilities	employ <del>solar and</del>	
water utilities		windalternative energy sources,	
		such as solar, wind, anaerobic	
		digestion, or other distributed	
		generation technologies to	
		generate all or part of the power	
		required for utility operations.	
		Unused power can be sold back	
		to the grid.	

# Rationale for Retain/Revise/Complete/Delete Assessment:

• Revised to list potential alternative energy sources that could be used by water utilities.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Develop energy and	Counties,	Communities should develop a	Revise
water efficiency and	<u>m</u> Municipaliti	baseline analysis of energy and water	
conservation	es	use, broadly identify potential	
strategies		efficiency and conservation measures,	
		and analyze the feasibility of	
		implementing them, including the	
		availability of financing. This strategy	
		should be used as an input to local	
		comprehensive planning and as a	
		guide to implementation. CMAP can	
		support local governments through	
		one-on-one technical assistance, and	
		also by working through appropriate	
		state and local agencies.	

 Published in June 2011, "PlanIt Green: A Sustainability Plan for Oak Park and River Forest" includes numerous baseline metrics, including information on energy consumption. The report was prepared by Seven Generations Ahead and Delta for Oak Park-River Forest Community Foundation.

# Rationale for Retain/Revise/Complete/Delete Assessment:

• Update the "Lead Implementers" list to include counties. CMAP's role in water efficiency/conservation can be to support municipalities through influential entities such as the IDNR Office of Water Resource's Lake Michigan Allocation Program and the Northwest Water Planning Alliance. Otherwise, CMAP will continue to work one-on-one with communities who apply for local technical assistance, assuming there is funding to support this type of work.